CASE REPORT OF TWO "SECONDARY" ATTACKS OF DHF/DSS IN A SINGLE CHILD

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OBJECTIVE : To record the details of illness of a boy with two attacks of DSS separated by 5 years, both with a "secondary" HAI seroresponse pattern.

BACKGROUND : A broad, high HAI seroresponse in a child with clinical evidence of dengue hemorrhagic fever can be taken as good evidence that the child has been previously infected with a flavivirus and currently is undergoing another flavivirus infection. To date there has been no data to determine if DHF/DSS occurs in only second flavivirus infections or may also occur in third or subsequent flavivirus infections.

CASE REPORT : The main clinical features of the two attacks are listed in Table 1, and the HAI serologic results in Table 2. No viruses were isolated on either attack.

COMMENT : The serologic results are unequivocal; both attacks were accompanied by a typical anamnestic serum antibody response. This case strongly suggests that a third flavivirus infection can result in DHF/DSS.

Although several thousand cases of DHF/DSS have been treated and serologically evaluated at Bangkok Children's Hospital, this is only the second documented instance of two attacks of DHF in a single child, and the first documented instance of two "secondary" attacks in one child.

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Table 1. Clinical summary of first and second attacks of DSS in a single child.

	First attack	Second attack
CASE #	D76-071	D81-108
DATE	13 Sep 1976	9 Aug 1981
AGE*	9	13*
Prodrome	High fever 4 days	High fever 3 days
Fever drop just prior to admission	Yes	Yes
Petechia	+ (axilla, palate)	++ (legs)
Bleeding	0	0
Hepatomegally	2 cm	0
BP	100/80	110/92, cold sweat
Rash	++ maculopapular	0
Hematocrit admission	45	46
maximum	47	48
discharge	37	42
Platelet count (per mm^3)	15×10^3	20×10^3
WBC (per mm^3)	3×10^3	7.3×10^3
Treatment	IV fluids, 3300 ml	IV fluids, 4000 ml
Grade	II-III	III

* Birth date 9 Sept 1967

Table 2. HAI serology results in a child with two "secondary" attacks of DHF/DSS.

CLINICAL CONDITION	DATE	HAI TITER				
		D1	D2	D3	D4	JE
DSS attack #1	13 Sep 76	1280	1280	>10240	>10240	2560
	15 Sep 76	2560	1280	>10240	>10240	2560
	17 Sep 76	>10240	2560	>10240	>10240	5120
	27 Sep 76	1280	640	1280	>10240	2560
	12 Oct 76	2560	1280	2560	>10240	2560
DSS attack #2	10 Aug 81	1280	1280	5120	1280	320
	27 Aug 81	>10240	5120	>10240	>10240	1280
WELL	6 May 1982	20	20	40	40	10